Think Health Act Now!
CITY OF MILWAUKEE
HEALTH DEPARTMENT
Bevan K. Baker,
Commissioner of Health
www.milwaukee.gov/health

City of Milwaukee Health Department Laboratory
Clinical and Environmental Microbiology
www.milwaukee.gov/healthlab
Phone: (414) 286-3526

SUMMARY OF CONFIRMED INFECTIONS

Steve Gradus, PhD, D(ABMM)
Laboratory Director

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Sanjib Bhattacharyya, PhD
Chief Molecular Scientist

The November 2010 issue presents the laboratory diagnosis of some of the infectious diseases and the reference microbiology work done in this laboratory during October 2010 and new cases of syphilis in Milwaukee during October 2010. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during August 2010 is also included.

Syphilis

Test	Total	Test	Total
RPR Reactive	1	TPPA Reactive	8
VDRL Reactive	24	Darkfield Positive	0

New Cases of Syphilis:

Stage	Number of Cases	
	October 2010	October 2009
Primary syphilis	0	0
Secondary syphilis	0	0
Early latent	0	3
Late latent	0	1
Total	0	4

Source: Wisconsin Division of Health

Gonorrhea Antimicrobial Susceptibility Testing

Number Tested	Decreased Susceptible (DS) / Resistant (R) Antibiotics			
	Ciprofloxacin	Cefixime	Ceftriaxone	Azithromycin
45	0	0	0	0

Isolates Other Than *N. gonorrhoeae*

Organism	Site	Number Isolates	Organism	Site	Number Isolates
Ureaplasma urealyticum	Genital	12	*Mycoplasma hominis*	Genital	4

Enteric Parasites Identified

Age	Sex	Parasite
19	M	*Blastocystis hominis*
17	M	*Blastocystis hominis*
25	M	*Blastocystis hominis*
29	M	*Blastocystis hominis*
36	M	*Blastocystis hominis*
41	M	*Blastocystis hominis*
43	M	*Blastocystis hominis*
32	F	*Blastocystis hominis*
		Endolimax nana
6	F	*Blastocystis hominis*
		Endolimax nana
		Giardia lamblia
17	F	*Blastocystis hominis*
		Iodamoeba buetschlii
36	M	*Blastocystis hominis*
		Entamoeba histolytica/Entamoeba dispar
		Iodamoeba buetschlii
6	M	*Blastocystis hominis*
		Entamoeba species
		Iodamoeba buetschlii
20	M	*Endolimax nana*
27	M	*Entamoeba coli*
11	F	*Entamoeba coli*
21	F	*Entamoeba coli*
5	M	*Entamoeba coli*
		Giardia lamblia
5	F	*Entamoeba coli*
		Giardia lamblia
60	F	*Entamoeba coli*
		Iodamoeba buetschlii
16	M	*Giardia lamblia*
7	F	*Giardia lamblia*
19	F	*Giardia lamblia*

Mycobacterial Infections

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
26	M	+	+	-	*M. avium* complex
37	M	-	+	+	*M. avium* complex
51	M	-	+	+	*M. avium* complex
50	M	-	+	+	*M. avium* complex
		-	+	-	*M. abscessus*
37	M	-	+	-	*M. fortuitum* group
40	M	-	+	+	*M. gordonae*
13	F	-	+	+	*M. gordonae*

ND = Not done

Reference Cultures

Age	Sex	Source	Identification
60	M	BAL	*Bacillus* species, NOT *Bacillus anthracis*
33	M	Surface wound	*Haemophilus haemolyticus*
22	M	Genital	*Haemophilus parainfluenzae*
85	M	Blood	*Moraxella osloensis*
22	M	Throat	*Neisseria meningitides*
18	F	Genital	*Neisseria gonorrhoeae*
20	F	Genital	*Neisseria gonorrhoeae*
21	M	Genital	*Neisseria gonorrhoeae*
22	M	Genital	*Neisseria gonorrhoeae*
83	F	Bronchial wash	*Rothia aeria*
43	F	Urine	*Salmonella* Durban
25	F	Stool	*Salmonella* Enteritidis
35	M	Stool	*Salmonella* Monophasic
11	M	Stool	*Salmonella* Saintpaul
35	F	Stool	*Salmonella flexneri* type 2

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during August, 2010

Mycobacterium species		Brown	Dane	Eau Claire	Fond du Lac	La Crosse	Marathon	Marinette	Milwaukee	Outagamie	Racine	Rock	Sheboygan	Winnebago	Wood	TOTALS
***M. tuberculosis* complex**	Pulm		1													**1**
	Extra		1													**1**
Total *M. tuberculosis* complex		**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
***M. avium* complex**	Pulm	1	12		1	4	1		47	1	1		1	2	1	72
	Extra			1		2			1							4
M. gordonae	Pulm	1	8						9	1	1	1		2	1	24
	Extra				1											1
M. chelonae-abscessus	Pulm		4					1	3		1			1		10
	Extra		1												1	2
M. fortuitum *group*	Pulm	1							3							4
	Extra								1							1
M. kansasii	Pulm								3							3
	Extra															0
M. marinum	Pulm															0
	Extra		1													1
M. mucogenicum	Pulm															0
	Extra															0
M. xenopi	Pulm								2							2
	Extra															0
M. lentiflavum	Pulm						1									1
M. terrae *complex*	Pulm									1						1
TOTALS		**3**	**26**	**1**	**2**	**6**	**2**	**1**	**69**	**3**	**3**	**1**	**1**	**5**	**3**	**126**

Extra-Pulmonary Sources of Isolation:

*M. tube*rculosis Extra-pulmonary:	1 L5 vertebral aspirate
M. avium complex Extra-pulmonary:	2 lymph node, 1 stool, 1 blood
M. gordonae Extra-pulmonary:	1 back tissue
Other *Mycobacterium* species:	*M. fortuitum* group: 1 abdomen; *M. chelonae/abscessus*: 1 wrist, 1 leg; *M. marinum*: 1 finger skin

***M. tuberculosis* complex First-Line Drug Susceptibility Testing*:**

Drug Resistance	Number of Isolates
Susceptible to all first-line drugs	1
Resistant to both INH concentrations	1
TOTAL	2

(*) Drugs tested: isoniazid=INH (0.2 ug/ml and 1.0 ug/ml), rifampin (1.0 ug/ml), ethambutol (5.0 ug/ml), and pyrazinamide=PZA (100 ug/ml)

Source: Mycobacteriology Laboratory Network Data Report, WI State Laboratory of Hygiene, Madison, WI

Virus Isolations from Clinical Specimens

Age	Sex	Source	Symptoms	Agent
18	M	Throat	Ulceration; R/O HSV	Coxsackie type B2
30	M	Throat	Fever, headache, URI, cough, sore throat	Rhinovirus
92	F	Throat	R/O influenza	Rhinovirus
18	F	Throat/NP	Fever, sore throat, cough	Herpes Simplex Virus type 1

Herpes Simplex Virus Isolations

Agent	Number of Isolates
Herpes Simplex type 1	14
Herpes Simplex type 2	7

Molecular Amplification and PCR

Agent	Method	Tested	Positive	% Positive
Enterovirus	RT-PCR	1	1	100%
Influenza	RT-PCR	18	0	0%
Norovirus	RT-PCR	1	0	0%
Bordetella pertussis/parapertussis	RT-PCR	3	0	0%
Chlamydia trachomatis	ProbeTec	527	59	11.2%
Neisseria gonorrhoeae	ProbeTec/GenProbe	642	50	7.8%

DNA Sequencing: The MHD laboratory uses 16S rRNA and the D2 region of the 26S rRNA genes for DNA sequence-based microbial identification of selective reference bacteria and fungal isolates.

Reference Microbe	Target gene	Final Identification
Fungi	D2/26S rRNA	*Engyodontium* species

Respiratory Virus Surveillance:

September 1 - November 11, 2010

Respiratory Virus Panel Test Results		
Virus	**Positives**	**Percent**
Human Metapneumovirus (hMPV)	0	0.0%
Influenza B (INFB)	0	0.0%
Human Rhinovirus (HRV)	**9**	**11.8%**
Parainfluenza virus 1 (PIV1)	0	0.0%
Parainfluenza virus 2 (PIV2)	**4**	**5.3%**
Parainfluenza virus 3 (PIV3)	**1**	**1.3%**
Respiratory Syncitial Virus (RSV)	0	0.0%
Adenovirus Type E (Adeno E)	0	0.0%
Coronavirus NL63	**1**	**1.3%**

Number Tested = 78

****** IMPORTANT NOTES ******

- **Mycobacteriology at the MHD Laboratory:**

  A Real-time PCR assay is currently available at the MHD Mycobacteriology laboratory for the detection of *Mycobacterium tuberculosis* complex (MTBC) from the pulmonary specimens. The MTBC includes *M. tuberculosis, M. bovis, M. bovis* BCG, *M. africanum, M. microti, M. canettii, M. caprae*, and *M. pinnipedii*.

  The MHD provides state-of-the-art TB lab services in a biosafety level 3 (BSL-3) laboratory and uses conventional and rapid methods for the isolation, identification, and limited susceptibility testing of *M tuberculosis,* following the Association of Public Health Laboratories (APHL) and the Centers for Disease Control and Prevention (CDC) guidelines.

- **Public Health Laboratory Systems Improvement Program (L-SIP):**

  The MHDL hosted the Public Health Laboratory Systems Improvement Program (L-SIP) assessment meeting on Thursday November 18th, 2010 at the MATC conference facility. With over 70 community stakeholders participating, this was a bridge building effort with our stakeholders and will help define areas for improvement in the public health laboratory "system". Results and next steps will soon be posted. For further information, please see our website: http://city.milwaukee.gov/LSIP

- **Influenza:**

  Since influenza 2009 A/H1N1 is now considered "post-pandemic", all seasonal influenza PCR testing submitted to the MHD Laboratory will be no longer be "fee exempt", except for MHD surveillance testing sites.

- **Thanksgiving Holiday:**

  MHDL will be closed for the Thanksgiving Day Holiday on Thursday, November 25th and Friday, November 26, 2010. The Laboratory will re-open for normal business hours on Monday, November 29, 2010.

  Please contact the laboratory at (414) 286-3526 or mhdlab@milwaukee.gov during normal business hours with any questions. In case of emergency or beyond regular work hours, please call the City Hall Operator at 414 286-2150.